

Origin and dispersal, Smithsonian Institution Press, Washington, D.C., 310 pp.), from primitive to advanced:

Clematis vitalba (Ranunculaceae)
Boussingaultia leptostachya (Basselaceae)
Eriogonum sp. (Polygonaceae)
Erica cinerea (Ericaceae)
Tilia sp. (Tiliaceae)
Croton sp. (Euphorbiaceae)
Rubus sp. (Rosaceae)
Prunus caroliniana (Rosaceae)
Eysenhardtia amorphoides (Leguminosae)
Melilotus albus (Leguminosae)
Philadelphus coronarius (Saxifragaceae)
Cornus sp. (Cornaceae)
Ligustrum vulgare (Oleaceae)
Baccharis sarothroides (Compositae)
Senecio douglasii (Compositae)
Chrysothamnus sp. (Compositae)
Cirsium sp. (Compositae)
Mentha sp. (Labiatae)
Sorghum sp. (Gramineae)

It is instructive to compare this list with flower visitation records for *Asterocampa* by Neck (1983, J. Lepid. Soc. 37:269-274), another nymphalid genus that utilizes *Celtis* (Celtidaceae) for larval foodplants. The only overlap in nectar feeding for both was Leguminosae and Saxifragaceae. However, *Asterocampa* adults were also reported on the fruit of *Rubus* and *Prunus* (Rosaceae), two genera that appear in the flower visits for libytheids. These facts may take on phylogenetic significance, since *Libythea celtis* uses both *Celtis australis* L. and *Prunus* as larval foodplants (Vladimir B. Polacek, *in litt.*); and Rosaceae, Leguminosae, and Saxifragaceae are closely related. A preliminary survey of flower visitation records for butterflies appears in Shields (1972, Pan-Pac. Entomol. 48:189-203).

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MALE DETERMINED MATING DURATION IN BUTTERFLIES?

When considering what factors influence the mating duration in butterflies, it is important to know to what extent it can be influenced by each sex respectively. Sims (1979, Am. Midl. Nat. 102:36-50) suggested, in analogy with results by Leopold, Terranova and Swilley (1971, J. Exp. Zool. 176:353-360) on *Musca domestica*, that mating duration probably is controlled by the female. This may be true in the sense that the female can inform the male when she is ready to terminate the copulation. However, in butterflies it is more likely that the male ultimately determines mating duration. If there should exist a conflict between the male and the female about when to terminate the copulation, the construction of the male genitalia suggests that the male alone determines copulation duration. This inference is supported by two incidental observations I have made.

The first concerns a pair of *Coenonympha pamphilus* (Satyridae), where the female was killed during copulation. On 26 August 1982 in Timmernabben, Sweden, I released

a virgin female to a male. After mating for 1 h 39 min a crab spider (Thomisidae) attacked and grabbed the female. After 4 h 51 min I left them while they were still in copula but put a cage over them. When I returned half an hour later the copulation was over; the male was flying in the cage while the female was still held by the spider among the vegetation.

The other observation concerns a pair of *Pararge aegeria* (Satyridae) kept in a cage in the laboratory, where the male for unknown reasons died during copulation. They were found in copula on 5 February 1985 at 1100 h. It was still dark in the cage, and the pair must have been mating since 1840 h the day before when the light was switched off automatically. At 1340 h the light was turned on. At 1700 h the female was found flying in the cage with the male hanging from the tip of her abdomen. Upon inspection he was found to be dead. On 8 February the female was still alive and attached to the dead male. On 15 February the female was found dead, still in copula with the male.

Although not proven, it seems plausible that the copulation is ultimately terminated by the male. Further observations and experiments would be interesting.

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SATYRIUM AURETORUM AURETORUM (BOISDUVAL): A NEW
SPECIES FOR OREGON (LYCAENIDAE)

The senior author received a number of butterflies from the junior author among which were three female *Satyrrium auretorum auretorum* (Boisduval) with the following data: OREGON: Lake Co.; 2 miles south of Lakeview, 1 June 1981, *leg.* Ray Albright. Dornfeld (1980, *The butterflies of Oregon*, Timber Press, Forest Grove, OR) does not report the species for the state. The species has been expected there; it was taken towards the border in Siskiyou Co., California (Klamath River, near I-5, *vide* S. O. Mattoon). This new location also brings the species to within 20 miles of the Nevada border, another state where it is unrecorded.

We thank S. O. Mattoon for providing the northern California record.

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